

ACCESSION NR: AP4032507

violet light. A less active initiator such as the azobisisobutyronitrile must be used to obtain a maximum of monochloro substitution on the methyl of the methylchlorosilanes. "Z. F. Kirbyakova participated in the experimental part of the work." "The authors express their acknowledgement to A. I. Gershenovich and Ye. S. Balakirev for supplying them with the acetylcyclohexylsulfonyl peroxide." Orig. art. has: 1 table.

ASSOCIATION: None.

SUBMITTED: 11Oct62

SUB CODE: GC

DATE ACQ: 11May64

NO REF SOV: 005

ENCL: 00

OTHER: 004

Card: 2/2

MOTSAREV, G.V.; ROZENBERG, V.R.

Halogenation of aromatic silanes. Part 8: Preparation and  
properties of chlorine derivatives of phenylmethyldichlorosilane  
containing chlorine atoms in the aromatic nucleus. Zhur.ob.khim.

31 no.6:2004-2011 Je '61.

(MIRA 14:6)

(Silane) (Halogenation)

MOTSAREV, G.V.; ROZENBERG, V.R.

Halogenation of aromatic silanes. Part 10: Liquid-phase  
thermal chlorination of phenylmethyldichlorosilane.

Zhur.ob.khim. 32 no.11:3727-3731 N '62. (MIRA 15:11)  
(Silane) (Chlorination)

S/079/63/033/001/018/023  
D204/D307

AUTHORS: Motsarev, G. V. and Rozenberg, V. R.

TITLE: Halogenation of aromatic silanes. XI. The addition of chlorine of phenylmethyldichlorosilane. The preparation of hexachlorocyclohexyl(methyl)dichlorosilane

PERIODICAL: Zhurnal obshchey khimii, v.33, no. 1, 1963, 255-258

TEXT: A continuation of earlier work (ZhOKh, 32, 3727 (1962)), concerned with the chlorination of  $\text{PhMeSiCl}_2$  at 50 - 150°C. In the present study the chlorinations were conducted at lower temperature, owing to the lack of literature data concerning such reactions. In diffuse daylight, at 0 - 5°C, bubbling of gaseous  $\text{Cl}_2$  into the silane (molar ratio 3.71 moles  $\text{Cl}_2$  per mole silane, at the rate of 10 g/hr) resulted in hexachlorocyclohexyl(methyl)dichlorosilane as the main product (b.p. 174 - 179°C/5 mm Hg,  $d_{20}^{20} = 1.6868$ ,

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Halogenation of aromatic ...

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D204/D307

$n_D^{20} = 1.5673$ ), in 78.4% yield. On raising the temperature to 20-25°C and the  $\text{Cl}_2$ :silane ratio to 10:1, the yield of  $\text{C}_6\text{H}_5\text{Cl}_6(\text{CH}_3)\text{SiCl}_2$  fell to 46% and  $\text{C}_6\text{H}_3\text{Cl}_2(\text{CH}_3)\text{SiCl}_2$  was obtained in 19.6% yield.

Higher temperature thus promotes substitution into the aromatic ring. T. T. Tarasova and E. F. Kirbyakova took part in the experimental work.

SUBMITTED: February 5, 1962

Card 2/2

BIRYUKOV, I.P.; VORONKOV, M.G.; MOTSAREV, G.V.; ROZENBERG, V.R.; SAFIN, I.A.

Nuclear quadrupole resonance method of studying organosilicon compounds containing Si-Cl and C-Cl bonds. Dokl. AN SSSR 162 no.1:130-132 My '65. (MIRA 18:5)

1. Institut organicheskogo sinteza AN Latvyskoy SSR i Kazanskiy fiziko-tekhnicheskii institut AN SSSR. Submitted November 17. 1964.

L 16061-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM  
ACCESSION NR: AP4046175 S/0079/64/034/009/2911/2915

AUTHOR: Motsarev, G. V. ; Rozenberg, V. R. ; Tarasova, T. T.

TITLE: Halogenation of aromatic silanes XIV: Bromination of phenylmethyldi-  
chlorosilane

SOURCE: Zhurnal obshchey khimii, v. 34, no. 9, 1964, 2911-2915

TOPIC TAGS: halogenation, aromatic silane, phenylmethyldichlorosilane, bromination, aryl alkyl chlorosilane, ionic catalyst

ABSTRACT: The bromination of aryl-alkylchlorosilanes is briefly reviewed. Bromination of the title compound was conducted with dry bromine under diffused daylight with or without ionic catalysts (I,  $\text{SbCl}_3$ ) at various temperatures. The procedure is described, yields and identification of end products reported. Bromination without catalysts and a 1:1 molar ratio of the reagents led between 0-25 C to the formation of monobromophenylmethyldichlorosilane (90% yield). However, higher temperatures, to 60C yielded 35% of the mono-compound and products derived from splitting of the  $\text{Si-C}_{ar}$  bond in the phenylmethyldichlorosilane. A

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L 16061-65

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1:2 molar ratio led to synthesis of a mixture of mono- and dibromo compounds, as well as  $C_6H_4Br_2$ ,  $C_6H_5Br$ , etc. Other ratios were not successful. Splitting was more pronounced and proceeded faster in the presence of catalysts (10-15C). The new mono- and dibromophenylmethyldichlorosilanes, mono- and dibromophenylmethyldiethoxysilanes isolated from the end product are described. It was determined that the  $CH_3SiCl_2$  group directs the bromine atoms mainly towards the ortho and para position on the aromatic ring. "The fundamental analysis was conducted by M. A. Teplyashina's staff, for which the authors wish to express their thanks." Orig. art. has: 1 table

ASSOCIATION: None

SUBMITTED: 18Mar63

ENCL: 00

SUB CODE: CH

NO REF SOV: 009

OTHER: 000

Card 2/2



VOITSAREV, G.V.; KOLIBERO, V.R.

Preparation and properties of some polychloro-substituted tri-  
methylchlorosilane and trimethylethoxysilane. Zhur. prikl. khim.  
38 no.1:211-213 Ja '65. (MIRA 18:3)

ACCESSION NR: AP4034544

S/0020/64/155/005/1163/1166

AUTHORS: Dzhagatspanyan, R.V.; Filippov, M.T.; Motsarev, G.V.; Zetkin, V.I.; Rozenberg, V.R.

TITLE: Radiative chlorination of certain organochlorosilanes and organopolysiloxanes

SOURCE: AN SSSR. Doklady\*, .v. 155, no. 5, 1964, 1163-1166

TOPIC TAGS: chlorination, irradiation chlorination, organochlorosilane, organopolysiloxane, chlorination mechanism, polydimethylsiloxane, polyphenylmethylsiloxane, ethyltrichlorosilane, methyltrichlorosilane, dimethyldichlorosilane, phenyltrichlorosilane, phenylmethylchlorosilane, photochemical chlorination, substitution chlorination, addition chlorination, ionic mechanism, free radical mechanism

ABSTRACT: The mechanisms involved in the chlorination of various organosilane derivatives under the influence of  $\text{Co}^{60}$  radiation were investigated. A polydimethylsiloxane resin, molecular weight 400,000-500,000, was chlorinated at 0°C as a 4% solution in  $\text{CCl}_4$ . After

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chlorination under 4200 rad/min. radiation the chlorine content was 50-55%; optimum reaction time was 15-30 minutes. Total radiation greater than  $1.25 \times 10^5$  rad did not lead to a higher chlorine content, but promoted degradation of the polymer. By chlorinating polyphenylmethylsiloxane under the same conditions, products containing up to 56.1% chlorine were obtained. About 80% of the chlorine reacted with the aromatic nucleus and 20% replaced hydrogens on a methyl group. Chlorination of ethyltrichlorosilane (molar ratio  $\text{Cl}_2:\text{C}_2\text{H}_5\text{SiCl}_3=3:7$ ) at OC using 900 rad/min gave  $\alpha$ - and  $\beta$ -monochloroderivatives in a ratio of 1:1.7, corresponding to results obtained by photochemical chlorination. On chlorinating methyltrichlorosilane and dimethyldichlorosilane the amount of monochloro derivatives in the reaction mixture did not depend on the molar ratio of reagents and the change in the amount of dosage did not influence the products of chlorination. The relative reaction rate of methyltrichlorosilane did not depend on the concentration of chlorine and at OC and 3300 rad/min equaled  $0.148 \pm 0.030$  moles/liter-min. The magnitude is proportional to the square root of the power of dosage. The energy

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of activation is about 7300-6100 cal/mole for the reaction. Phenyl-trichlorosilane and phenylmethyldichlorosilane were chlorinated at 0-150C at 5900 and 800 rad/min at 0-20C. The chlorine added to the double bond of the aromatic nucleus giving  $C_6H_5Cl_6SiCl_3$  and  $C_6H_5Cl_6(CH_3)SiCl_2$ . This additive chlorination under radiation is analogous to photochemical chlorination. At 50C, addition chlorination products as well as products of substitution chlorination in the methyl group and the aromatic nucleus were formed. At 100-150C substitution chlorination of the aromatic nucleus predominated indicating ionic mechanism for the arylalkylchlorosilanes. A free radical mechanism was postulated for the alkylchlorosilanes. Orig. art. has: 11 equations and 1 table

ASSOCIATION: None

SUBMITTED: 16Nov63

ENCL: 00

SUB CODE: OC

NR REF SOV: 005

OTHER: 002

Card 3/3

L 13484-66 EWT(m)/EWP(j) RM

ACC NR: AP6002217

SOURCE CODE: UR/0080/65/038/012/2797/2803

AUTHOR: Motsarev, G. V.; Rozenberg, V. R.

ORG: none

TITLE: Preparation of phenyl-(monochloromethyl)-dichlorosilane

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 12, 1965, 2797-2803

TOPIC TAGS: organosilicon compound, chlorination, dimethyldichlorosilane, silane

ABSTRACT: Batch and continuous liquid phase processes of chlorinating phenylmethyldichlorosilane were studied in order to determine optimum conditions and methods for the synthesis of  $C_6H_5(CH_2Cl)SiCl_2$ . In the batch process, the initial concentration of azobisisobutylnitrile initiator was 0.1-0.3 wt % and the  $C_6H_5(CH_3)SiCl_2$  to  $Cl_2$  molar ratio varied from 10 to 1. In the continuous process (continuous removal and vacuum distillation of reaction products) the initiator concentration was 0.2% and the  $C_6H_5(CH_3)SiCl_2:Cl_2$  molar ratio was 10-2. For both operations the optimum temperature was 110°-115°C. Product composition as a function of the ratio of reagents for batch chlorination is shown in fig. 1.

UDC: 542.944+547.245

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L 13484-66

ACC NR: AP6002217

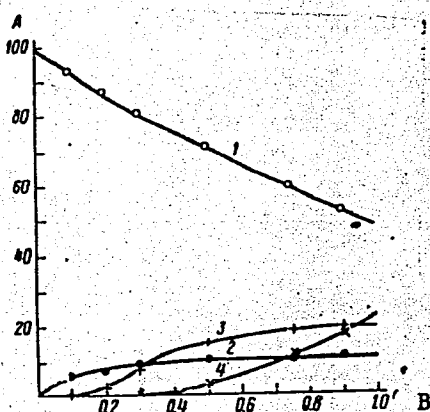


Fig. 1. A--product composition in %; B--molar ratio of  $\text{Cl}_2$  to  $\text{C}_6\text{H}_5(\text{CH}_3)\text{SiCl}_2$ ; 1--unsaturated  $\text{C}_6\text{H}_5(\text{CH}_3)\text{SiCl}_2$ ; 2-- $\text{C}_6\text{H}_5(\text{CH}_2\text{Cl})\text{SiCl}_2$ ; 3-- $\text{C}_6\text{H}_5(\text{CHCl}_2)\text{SiCl}_2$ ; 4-- $\text{C}_6\text{H}_5(\text{CCl}_3)\text{SiCl}_2$ .

In a continuous operation a maximum 84% selectivity to  $\text{C}_6\text{H}_5(\text{CH}_2\text{Cl})\text{SiCl}_2$  at 6.2% conversion level was achieved at 1 hour contact time. It was found that for both modes of operation (the molar ratio  $\text{C}_6\text{H}_5(\text{CH}_3)\text{SiCl}_2$  to  $\text{Cl}_2$ ) exerted the greatest effect on product distribution. For maximum yield of  $\text{C}_6\text{H}_5(\text{CH}_2\text{Cl})\text{SiCl}_2$ , a lower ratio of  $\text{C}_6\text{H}_5(\text{CH}_3)\text{SiCl}_2$  to  $\text{Cl}_2$  was required in the continuous process than in the batch process. Orig. art. has: 4 figures, 3 tables.

SUB CODE: 07/ SUBM DATE: 09Dec63/ ORIG REF: 007/ OTH REF: 001  
Card 2/2

MOTSAREV, G.V.; ROZENBERG, V.R.; TARASOVA, T.T.

Halogenation of aromatic silanes. Part 14: Bromination of phenyl-  
methyldichlorosilane. Zhur. ob. khim. 34 no.9:2911-2915 S '64.

(MIRA 17:11)

MOTSAREV, G.V.; ROZENBERG, V.R.

Preparation of monochloromethyltrichlorosilane. Zhur. prikl.  
khim. 37 no.2:388-392 F '64.  
(MIRA 17:9)



DZHAGATSPANYAN, R.V.; FILIPPOV, M.T.; MOTSAREV, G.V.; ZETKIN, V.I.  
ROZENBERG, V.R.

Radiation-induced chlorination of some organochlorosilanes and  
organopolysiloxanes. Dokl. AN SSSR 155 no. 5:1163-1166 Ap '64.  
(MIRA 17:5)

1. Predstavleno akademikom S.S.Medvedevym.

L 10662-63

EPF(c)/EWP(j)/EWT(m)/BDS--ASD--Pr-4/Pc-4--RM/WW  
S/079/63/033/004/009/010 64

AUTHOR: Motsarev, G.V., Rozenberg, V.R., Tarasova, T.T.

TITLE: Halogenation of aromatic silanes. XII. The obtaining and the properties of chlorine derivatives of n-tolylmethyldichlorosilane with atoms of chlorine in methyl groups. The synthesis of n-trichloro-methylphenyltrichloromethyldichloro(ethoxy)silanes.

PERIODICAL: Zhurnal obshchey khimii, v. 33, no. 4, 1963, 1299-1303 7

TEXT: It is established that upon the initiation of the reaction of chlorination of n-tolyl(methyl)dichlorosilane by azobisisobutyronitrile (110-115 degrees), chlorine derivatives of n-tolyl(methyl)dichlorosilane with an atom of chlorine in the methyl groups are formed. In this case the first CH<sub>3</sub> group which is chlorinated is the one in the aromatic ring which is in the

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.L 10662-63

S/079/63/033/004/009/010

Halogenation of aromatic silanes...

para position with respect to the atom of silicon. The chlorination of n-tolylmethyldichlorosilane in the presence of azobisisobutyronitrile, in contrast to the chlorination of phenylmethyldichlorosilane, is accompanied by destructive halogenation involving the splitting of the silane molecule at the C-Si link. Synthesized for the first time are n-dichloromethylphenyl(methyl)-dichlorosilane, n-trichloromethylphenyl(trichloromethyl)dichlorosilane, and n-trichloromethylphenyl(trichloromethyl)diethoxysilane.

SUBMITTED: May 8, 1962

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Card 2/2

L 16007-66 EWP(j)/EWT(m) RM

ACC NR: AP6005519

(N)

SOURCE CODE: UR/0080/66/039/001/0204/0207

AUTHOR: Motsarev, G. V.; Rozenberg, V. R.

ORG: none

TITLE: Preparation of phenyl(trichloromethyl)dichlorosilane

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 1, 1966, 204-207

TOPIC TAGS: organosilicon compound, silane, chlorination

ABSTRACT: Experiments on continuous liquid-phase chlorination of phenylmethyldichlorosilane in the presence of azobisisobutyronitrile for the purpose of preparing phenyl(trichloromethyl)dichlorosilane were carried out at 110-115°C by using the countercurrent method. The apparatus consisted of two reactors connected in series, phenylmethyldichlorosilane being supplied to one and chlorine to the other, and chlorination of  $C_6H_5(CH_3)SiCl_2$  was carried out in both. This arrangement created the best conditions for obtaining the necessary degree of chlorination and the most complete binding of chlorine. The two-stage chlorination of phenylmethyldichlorosilane led to the formation of mainly  $C_6H_5(CCl_3)SiCl_2$ , 98-99% of the chlorine

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UDC: 542.944+547.245

L 16007-66

ACC NR: AP6005519

supplied having combined. Data showed that the conversion of  $C_6H_5(CH_3)SiCl_2$  was close to 60% at the first stage and close to 40% at the second. The yield of  $C_6H_5(CCl_3)SiCl_2$  amounted to about 65%. Orig. art. has: 1 figure, 1 table.

SUB CODE: 07/ SUBM DATE: 25Dec63/ ORIG REF: 002/ OTH REF: 000

Card 2/2

MDTSAREV, G.V.; YAKUBOVICH, A.Ya.; ROZENBERG, V.R.; FILIPPOV, M.T.;  
DZHAGATSPANYAN, R.V.; BARDENSHTEYN, S.B.; KOLBASOV, V.I.;  
ZETKIN, V.I.

Halogenation of aromatic silanes. Part 17: Addition of chlorine  
to phenyl-trichlorosilane. Preparation of hexachlorocyclohexyl-  
trichlorosilane and the mechanism of its formation. Zhur. ob.  
khim. 35 no.7:1178-1183 J1 '65. (MIRA 18:8)

MOTSAREV, G.V.; ROZENBERG, V.R.

Preparation of bis(trichloromethyl)dichlorosilane. Zhur.prikl.khim.  
36 no.1:231-232 Ja '63. (MIRA 16:5)

(Silane)

MOTSAREV, G.V.; ROZENBERG, V.R.

Initiation of the reaction of chlorination of methylchlorosilanes  
with acetylcyclohexylsulfonyl peroxide. Zhur. prikl. khim. 37  
no. 4:920-922 Ap '64. (MIRA 17:5)



MOTSAREV, G.V.; ROZENBERG, V.R.

Thermal decomposition of trichloromethyltrichlorosilan. Zhur.  
prikl. khim. 37 no. 4:747-749 Ap '64. (MFA 17:5)

MOTSAREV, G.V.; YAKUBOVICH, A.Ya.; ROZENBERG, V.R.

Preparation and properties of hexachlorocyclohexylchlorosilanes.  
Dokl. AN SSSR 148 no.1:116-117 Ja '63. (MIRA 16:2)

1. Predstavleno akademikom I.L. Knunyantsem.  
(Silane)

MOTSAREV, G.V.; ROZENBERG, V.R.; TARASOVA, T.T.

Halogenation of aromatic silanes. Part 12: Preparation and properties of chloro derivatives of p-tolymethyldichlorosilane with chlorine atoms in methyl groups. Synthesis of p-trichloromethylphenyltrichloromethyldichloro (ethoxy) silanes. (MIRA 16:5)  
Zhur.ob.khim. 33 no.4:1299-1303 Ap '63.  
(Silane) (Halogenation)

MOTSAREV, G.V.; ROZENBERG, V.R.

Preparation of monochloromethyl(dimethyl)chlorosilane. Zhur.prikl.khim.  
37 no.1:132-136 Ja '64. (MIRA 17:2)

ACCESSION NR: AP4010486

S/0080/64/037/001/0132/0136

AUTHOR: Motsarev, G. V.; Rozenberg, V. R.

TITLE: Producing monochlormethyl(dimethyl)chlorosilicate

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 1, 1964, 132-136

TOPIC TAGS: chlorination, dimethyl chlorosilicate, chlorosilicate, induction effect, chlorine atoms, silicon, polychlorides, silicate-chlorine ratio, molar ratio, trimethyl chlorosilicate, azo-bis-isobutyronitrile

ABSTRACT: In the experiment under consideration trimethyl chlorosilicate was chlorinated by the same method as dimethyl dichlorosilicate; the process took place in a liquid phase and was initiated by azo-bis-isobutyronitrile. The amount of mono- and di(poly)chlorine-substitutions of trimethylchlorosilicate is determined primarily by the molar ratio of the initial reagents, silane and chlorine, that is, by the extent of the initial silane conversion. An experiment in chlorinating trimethyl chlorosilicane in a continuous flow system and with

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ACCESSION NR: AP4010486

different silane-chlorine molar ratios was based on a similar method. The study of the liquid-phase chlorination of trimethyl chlorosilicate in the presence of azo-bis-isobutyronitrile, with and without the withdrawal of the chlorination products from the reaction zone, has led to the conclusion that the major factor affecting the composition of the trimethyl chlorosilicate chlorination products was the silane-chlorine molar ratio. The content of the polychlorine-substitutions in the reaction mixture decreases as that ratio increases. Orig. art. has: 3 figures, 2 tables.

ASSOCIATION: none

SUBMITTED: 08May62

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: CH

NO REF SOV: 001

OTHER: 002

Card 2/2

ACCESSION NR: AP4018070

S/0080/64/037/002/0388/0392

AUTHORS: Motsarev, G. V.; Rozenberg, V. R.

TITLE: Production of monochloromethyltrichlorosilane

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 2, 1964, 388-392

TOPIC TAGS: monochloromethyltrichlorosilane, production, continuous production, batch production, liquid phase chlorination, methyltrichlorosilane chlorination, azobisisobutyronitrile, ultraviolet light initiator, reactant ratio

ABSTRACT: A study of the liquid phase chlorination of methyltrichlorosilane in the presence of azobisisobutyronitrile, with and without the removal of chlorination products from the reaction zone, established that the prime factor determining the yield of  $\text{CH}_2\text{ClSiCl}_3$ , as in the cases of  $\text{CH}_2\text{Cl}(\text{CH}_3)\text{SiCl}_2$  and  $\text{CH}_2\text{Cl}(\text{CH}_3)_2\text{SiCl}$ , is the molar ratio of the reactant silane and chlorine. This effect is most pronounced in the case of  $\text{CH}_2\text{ClSiCl}_3$ . In the continuous process, to obtain the maximum amount of  $\text{CH}_2\text{ClSiCl}_3$  with the minimum amount of polychloromethyltrichlorosilanes, the  $\text{CH}_3\text{SiCl}_3:\text{Cl}_2$  ratio should be

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about 1:0.2 (sp. gravity of the reaction mixture 1.30-1.31). The composition of the  $\text{CH}_3\text{SiCl}_3$  chlorination products also depends on the initiator. Initiation with azobisisobutyronitrile, as contrasted to initiation with ultraviolet light, makes it possible to obtain  $\text{CH}_2\text{ClSiCl}_3$  by liquid phase chlorination of  $\text{CH}_3\text{SiCl}_3$  without removing chlorination products from the reaction zone. With the same reagent ratio, more polychlorides are formed in the continuous than in the batch process, hence, a lower conversion of the original silane to  $\text{CH}_2\text{ClSiCl}_3$  is realized in the continuous process. Orig. art. has: 2 tables and 3 figures.

ASSOCIATION: None

SUBMITTED: 17Jul62

DATE ACQ: 19Mar64

ENCL: 00

SUB CODE: CH

NR REF SOV: 007

OTHER: 004

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Card



MOTSAREV, G.V.; ROZENBERG, V.R.

Halogenation of aromatic silanes. Part 7: Synthesis and properties of chloro derivatives of phenylmethyldichlorosilane containing chlorine atoms in the methyl group. Zhur. ob. khim. 30 no.9:3011-3015 S '60. (MIRA 13:9)

(Silane)

53700 2209

S/079/60/030/009/009/015  
B001/B064

AUTHORS: Motsarev, G. V., Rozenberg, V. R.

TITLE: Halogenization of the Aromatic Silanes. VII. Synthesis and Properties of the Chlorine Derivates of Phenyl-methyl Dichlorosilane That Contain Chlorine Atoms in the Methyl Group

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No.9, pp.3011-3015

TEXT: On the basis of the synthesis of phenyl trichlorosilane (Ref. 1), diphenyl dichlorosilane (Ref. 2), benzyl trichlorosilane (Ref. 3), p-tolyl trichlorosilane (Ref. 4) described by A. Ya. Yakubovich and collaborators (Refs. 1-6) the authors of the present paper chose phenyl methyl dichlorosilane for experimenting, since its halogenization had hitherto not been described. The authors aimed at synthesizing its chlorine-substituted derivatives with chlorine atoms in the methyl group and in the aromatic cycle. To synthesize the derivatives with chlorine atoms in the methyl group, initiated chlorination of phenyl-methyl dichlorosilane was carried out in the presence of azo-bis-isobutyronitrile. This chlorination was expected to proceed as a chain mechanism and lead to the formation of all possible substitution derivatives in the methyl group. The degree of

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Halogenization of the Aromatic Silanes.  
 VII. Synthesis and Properties of the Chlorine  
 Derivates of Phenyl-methyl Dichlorosilane That  
 Contain Chlorine Atoms in the Methyl Group

S/079/60/030/009/009/015  
 B001/B064

chlorination of the methyl group depends, as was found, on the molar ratio between silane and chlorine (Ref. 6). In consideration of the fact that in phenyl-methyl dichlorosilane, as well as in methyl chlorosilane, the chlorination of the methyl chloride group takes place more easily than in the non-substituted methyl group, the chlorination of phenyl-methyl dichlorosilane (to obtain the monochlorine derivative with one chlorine atom in the methyl group), was carried out in such a way that a considerable amount of the not completely reacted silane remained in the reaction mass. (Details in the experimental part). On initiating the chlorination of phenyl-methyl dichlorosilane with azo-bis-isobutyronitrile (110-120°C) the chlorine derivatives of phenyl-methyl dichlorosilane were found to form which contain chlorine atoms in the methyl group only. A chlorination of the aromatic cycle of phenyl-methyl dichlorosilane does not occur in this case. Chlorination of phenyl-methyl dichlorosilane in the presence of the above nitrile occurs without cleavage of the C - Si bond. Phenyl(chloro methyl) dichlorosilane and phenyl(trichloro methyl) dichlorosilane that have hitherto been unknown were separated and identified. A table gives their constants. Phenyl (chloro methyl)-diethoxysilane and phenyl (trichloro-

Card 2/3

Halogenization of the Aromatic Silanes.  
VII. Synthesis and Properties of the Chlorine  
Derivates of Phenyl-methyl Dichlorosilane That  
Contain Chlorine Atoms in the Methyl Group

S/079/60/030/009/009/015  
B001/B064

methyl) diethoxysilane were newly synthesized and identified (Scheme 2).  
There are 1 table and 6 Soviet references.

SUBMITTED: July 31, 1959

Card 3/3

14563

S/020/63/148/001/024/032  
B106/B186

58700

AUTHORS: Motsarev, G. V., Yakubovich, A. Ya., Rozenberg, V. R.

TITLE: Production and properties of hexachloro cyclohexyl chlorosilanes

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 1, 1963, 116-117

TEXT: The addition of chlorine to phenyl trichlorosilane (I) and phenyl methyl dichlorosilane (II) was studied for the first time. Under the action of chlorine at 0-2°C in diffuse daylight, both compounds yield exclusively the addition products hexachloro cyclohexyl trichlorosilane (III) (28.9% yield) and hexachloro cyclohexyl(methyl) dichlorosilane (IV) (78.4% yield). Ultraviolet light considerably increases yield and reaction rate. The yield of addition products decreases with increasing reaction temperature, and substitution occurs. Substitution occurs exclusively at 120°C (compound I) and 50°C (compound II). Additive chlorination of aromatic chlorosilanes, especially of compound II, proceeds much more readily than chlorination of benzene. This is explained by the fact that the electrophilic silyl chloride group disturbs the symmetry of the  $\pi$ -electron cloud of the benzene ring, and

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Production and properties of ...

S/020/63/148/001/024/032  
B106/B186

deactivates the phenyl radical for substitution reactions. Compound II, the silicon atom of which is less electrophilic, undergoes additive chlorination more readily than compound I. Therefore, there is a relationship between the electrophilic effect of the substituents and the rate of additive chlorination of substituted aromatic compounds. .  
Compounds III and IV are colorless, viscous liquids which fume slightly in air, are soluble in organic solvents, and crystallize when standing for a long time (m.p. 90-93°C). Their wide boiling ranges (Table 1) are due to the existence of stereoisomeric mixtures. Under the action of water, they are hydrolyzed to siloxanes; in lyes, the hexachloro cyclohexyl radical is split off, and goes over into trichlorobenzene with separation of hydrogen chloride. III and IV react with ethanol to give hexachloro cyclohexyl ethoxy silanes (Table 1). There is 1 table.

PRESENTED: April 12, 1962, by I. L. Knunyants, Academician

SUBMITTED: April 4, 1962

Card 2/3

MOTSAREV, G.V.; ROZENBERG, V.R.

Halogenation of aromatic silanes. Part 9: Photochemical  
chlorination of phenylmethyldichlorosilane. Zhur.ob.khim. 32  
no.3:909-915 Mr '62. (MIRA 15:3)  
(Silane) (Chlorination)

25391

S/080/61/034/002/011/025  
A057/A129

158170

AUTHORS: Motsarev, G.V., Rozenberg, V.R., Chashnikova, T.Ya.

TITLE: Preparation of monochloromethyl-methyldichlorosilane

PERIODICAL: Zhurnal Prikladnoy Khimii, v 34, no 2, 1961, 356-362

TEXT: This is the first paper in a series concerning halogenation of aliphatic silanes and siloxanes. Preparation of chloro-substituted methylchlorosilanes by initiated chlorination of the latter in the presence of azo-bis-isobutyronitril (investigated already in previous works) was studied in details. Particularly reactions to obtain monochloro-substituted dimethylchlorosilane were investigated. Chlorination experiments were carried out in the liquid phase without solvent and light and initial contents of initiator not exceeding 0.05%, while the total maximum consumption was 0.2%. The initiator was added by batches corresponding to the decrease of HCl liberation or in the continuous process together with

Card 1/6



25391

S/080/61/034/002/011/025

Preparation of monochloromethyl-methyldichlorosilane

A057/A129

the initial silane. Two series of experiments were carried out, i.e., periodical (reaction products were separated from the reaction zone) and continuous chlorination (no separation of reaction products). It was observed that the main factor determining the degree of chlorination of the methyl group in dimethylchlorosilane is the molal ratio silane : chlorine. Decrease of the molal ratio increases the content of di-(poly)-chloro-substituted derivatives. The effect of the ratio between dimethyldichlorosilane and chlorine on the results of chlorination obtained by the batch process can be seen from Tab. 1. Continuous chlorination experiments were carried out at 60°C with 0.2% of initiator, varying molal ratio silane/chlorine and contact time. The results (Tab. 2) indicate the same effect of the silane/chlorine ratio on the reaction product as in batch chlorination, i.e., decrease of the molal ratio increases the content of di-(poly)-chloro-substituted derivatives in the product. In order to obtain a maximum yield of monochloromethyl-methyldichlorosilane in continuous chlorination of dimethyldichlorosilane (separating the chlorination product from the reaction zone) the molal ratio  $(\text{CH}_3)_2\text{SiCl}_2 : \text{Cl}_2$  must be greater than in

Card 2/6

25391

Preparation of monochloromethyl-methyldichlorosilane

S/080/61/034/002/011/025  
A057/A129

the batch process. Maximum yield in continuous chlorination is obtained at a molal ratio of  $(CH_3)_2SiCl_2 : Cl_2 = 1 : 0.3$  and a contact time of 0.5 hr. There are 3 figures, 2 tables and 6 Soviet-bloc references.

SUBMITTED: June 14, 1960

Card 3/6

25397

S/CSC/61/034/002/019/025  
A037/A129

15 8170

AUTHORS: Motsarev, G.V.; Rozenberg, V.R.; Ohashnikova, T.Ya.  
TITLE: Preparation and properties of polychlorosubstituted dimethyl-  
dichlorosilane and dimethyldiethoxysilane

PERIODICAL: Zhurnal Prikladnoy Khimii, v 34, no 2, 1961, 430-440

TEXT: This is the 2nd communication on halogenation of aliphatic  
silanes and siloxanes. A detailed investigation on thoroughgoing chlori-  
nation of dimethyldichlorosilane was made to obtain tri-, tetra-, penta-  
and hexachloro-substituted products. The following new compounds were  
separated and characterized: dichloromethylmethyl-, trichloromethylmethyl-,  
trichloromethylchloromethyl-, trichloromethyldichloromethyl- and bis(tri-  
chloromethyl)-diethoxysilane and also trichloromethyltriethoxysilane. The  
present investigations were necessary, since in literature the only publica-  
tion concerning thoroughgoing chlorination of dimethyldichlorosilane publish-

Card 1/5

25397

S/080/51/034/002/019/025  
4057/4129

Preparation and properties of ...

ed by F. Ruge and W. Zimmermann (Ref. 24 Ber., 87, 280 (1954)) does not contain data on the chemistry of the process and properties of the products. Dimethylchlorosilane was chlorinated in the present experiments at different temperatures in  $\text{CCl}_4$  or without  $\text{CCl}_4$ , using azobisisobutyronitrile as initiator. Also photochlorinations were carried out (ultraviolet light source was a GPK-2 (PRK-2) quartz lamp). Since single polychlorosubstitutes of dimethyldichlorosilane could not be separated from the reaction mixture, ethenification with absolute alcohol was carried out and the obtained polychlorodimethyldiethoxysilanes were isolated by rectification (Tab.). Composition of the obtained products was determined by hydrolysis of the chloroalkylsilanes with water or aqueous NaOH solutions forming the corresponding chloromethanes. By chlorination of dimethylchlorosilane  $(\text{CH}_3)_2\text{SiCl}_2$  at  $60^\circ\text{--}105^\circ\text{C}$  using 3.1 moles of  $\text{Cl}_2$  per mole of  $(\text{CH}_3)_2\text{SiCl}_2$  the trichlorosubstitute is obtained with a 95.1% yield. No side reactions due to splitting of the Si-C bond were observed. Using the ratio of  $(\text{CH}_3)_2\text{SiCl}_2 : \text{Cl}_2 = 1 : 4.7$  under the same conditions a mixture of tri-, tetra- and pentachlorosubstitutes containing 41.1% of tetrachlorodimethylchlorosilane can be obtained. In continued chlorination (molar ratio of

Card 2/5

25397

S/080/61/034/002/019/025  
A057/A129

Preparation and properties of ...

$(\text{CH}_3)_2\text{SiCl}_2 : \text{Cl}_2 = 1 : 7.4$  the pentasubstitute can be obtained with a 17.1% yield. Simultaneous with the chlorination a side reaction occurs, i.e., a splitting reaction of the chlorination products in the Si-C bond. It was observed that this side reaction (destructive chlorination) inhibits formation of bis-(trichloromethyl)-dichlorosilane (II), but at a ratio of  $(\text{CH}_3)_2\text{SiCl}_2 : \text{Cl}_2 = 1 : 10.2$  only  $\text{CCl}_4$  and  $\text{CCl}_3\text{SiCl}_2$  were formed. Chlorination was carried out, therefore, under softer conditions, i.e., at  $60^\circ\text{C}$  in a  $\text{CCl}_4$  medium (ratio of  $(\text{CH}_3)_2\text{SiCl}_2 : \text{Cl}_2 = 1 : 12.5$ ) and (II) was obtained with a  $\sim 45\%$  yield. Using photochlorination the temperature could be lowered even more (to  $20^\circ\text{--}25^\circ\text{C}$ ) and thus a 60% yield of (II) could be obtained. Thus increasing temperature increases the splitting process and decreases the yield of (II). Trichlorodimethyldichlorosilane could be isolated by crystallization. It was determined by hydrolysis that all three chlorine atoms are in one  $\text{CH}_3$ -group. It was observed that stability of the Si-C bond decreases with increasing chlorination degree of the methyl groups. There is 1 table and 7 references: 3 Soviet-bloc and 4 non-Soviet-bloc. The three English-language publications read as

Card 3/5

25397

Preparation and properties of ...

S/080/61/034/002/019/025  
AC57/A129

follows: R. Kriesle, *Is Elliot*, *J. Am. Chem. Soc.*, 67, 1810 (1945); and  
*J. Am. Chem. Soc.*, 69, 2291 (1946); P.A. DiGiorgio, L.H. Sommer, and F.C.  
Whitemore, *J. Am. Chem. Soc.*, 70, 3512 (1948).

SUBMITTED: June 14, 1960

Card 4/5

MOTSAREV, G.V.; ROZENBERG, V.R.; MINDLIN, Ya. I.

Particular aspects to phenylmethyldichlorosilane chlorination.  
Zhur.VKHO 6 no.353-354 '61. (MIRA 14:6)  
(Silane) (Chlorination)

LOZINSKIY, N.N., inzh.; ROZENBERG, V.Ya., inzh.-kapitan 3-go ranga

Methods of stating algorithms and the ALGOL-60 language.  
Mor. sbor. 47 no.5:43-52 My '64. (MIRA 18:6)



BAZILEVICH, Vsevolod L'vovich; BAZILEVICH, Leonid Vsevolodovich;  
LOZINSKIY, N.M., inzh., retsenzent; ROZENBERG, V.Ya.,  
nauchn. red.; NIKITINA, M.I., red.

[Command system and programming for the BESM-2 computer]  
Sistema komand i programmirovaniia dlia BESM-2. Leningrad,  
Izd-vo "Sudostroitel'stvo," 1964. 341 p. (MIRA 17:8)

DYMARSKIY, Yakov Semenovich; LOZINSKIY, Nikolay Nikolayevich;  
MAKUSHKIN, Aleksandr Timofeyevich; ROZENBERG,  
Vladimir Yakovlevich; ERGLIS, Vladimir Andor'fovich;  
~~OGNESIAN, L.A.~~, kand. tekhn. nauk, retsenzent;  
GINZBURG, R.I., kand. tekhn. nauk; BUROV, V.N., nauchn.  
red.; CHICHKANOVA, V.S., red.; KONTOROVICH, A.I., tekhn.  
red.

[Programmer's manual] Spravochnik programmista. [By] IA.S.  
Dymarskii i dr. Leningrad, Sudpromgiz. Vol.1. 1963. 627 p.  
(MIRA 16:9)

(Programming (Electronic computers))--Handbooks, manuals, etc.)

ROZENBERG, V.Ya.; FROKHOROV, A.I.; VOLKOVA, I.M., red.

[What queuing theory is] Chto takoe teoriia massovogo ob-  
sluzhivaniia. Izd. 2. Moskva, Sovetskoe radio, 1965. 254 p.  
(MIRA 18:12)

6(0)

SOV/107-59-2-52/55

AUTHOR: Rozenberg, Ya. and Klimov, V.

TITLE: Summing-Up the Communications Contest (Itogi konkursa svyazistov)

PERIODICAL: Radio, 1959, Nr 2, p 61 (USSR)

ABSTRACT: The last contest in 1957-58, for the best suggestions in the field of television reception, radiofication and intraregional telephone communication, carried out by the Ministerstvo svyazi SSSR (USSR Ministry of Communication), was successful. The following participants were awarded: S. Sher, L. Zass, G. Pyatigorskiy and A. Smilyanskiy (engineers from the television repair shop Nr 33 in Kiyev) presented a device for adjusting video and audio channels and checking all receiver parts at home; B. Khilichenko presented a universal testing device ("UIS-3") for checking kinescopes, tubes, output transformers of line scanning and vertical sweep, focusing and deflecting systems,

Card 1/2

ANTONOV, V., arkhitektor; ROZENBERG, Ya., inzh.

Experimental construction on the "Zavety Lenina" State Farm.  
Sel'. stroi. [i.e.16] no.3:5-8 Mr '62. (MIRA 15:7)  
(Kalinin Province—Rural planning)

ROZENBERG, Ya., inzh.

The rural housing construction combine is a new form of building  
organization. Sel'. stroi. no.7:3-4 '62. (MIRA 15:8)  
(Construction industry) (Farm buildings)

ROZENBERG, Ya.

Underground electric lines made of cables with nonmetallic covering.

Radio no.11:20-21 N'55.

(MIRA 9:1)

(Electric cables)

BADANOV, G., arkhitektor; ROZENBERG, Ya., inzh.

Large-panel houses using elements with a low cement content. Na  
stroi. Ros. no.7:30-32 JI '61. (MIRA 14:8)  
(Apartment houses)



AFANAS'YEV, Aleksandr Porfir'yevich; GUSEV, Simon Stepanovich;  
KRISTAL'NYY, Vladimir samoylovich; RAMENSKIY, Boris Nikolayevich,  
redaktor; ROZENBERG, Yakov Grigor'yevich; SILIN, Konstantin  
Fedorovich; GAVRILOV, A.V., redaktor; SOKOLOVA, R.Ya., tekhnicheskii redaktor.

[Establishing electric and radio communication facilities in the district] Eksploatatsiya sredstv elektrosviazi i radiofikatsii v raione. Moskva, Gos.izd-vo lit-ry po voprosam aviazi i radio, 1955. 187 p. (MLRA 8:12)  
(Telecommunication) (Radio)

KANTOR, L.Ya.; GUMEL'YA, A.N.; ROZENBERG, Ya.G.; AFANAS'YEV, A.P.;  
SAMORUKOV, D.A.; GUSEV, S.S.; DOGADIN, V.N.; RAMENSKIY,  
B.N.; KARASIK, N.S.; PIONTKOVSKIY, B.A.; Primal uchastiye  
MEDOVAR, A.I.; SVERDLOVA, I.S., red.; ULANOVSKAYA, N.M.,  
red.; MARKOCH, K.G., tekhn. red.

[Electrical communications and wire broadcasting] Elektri-  
cheskaya svyaz' i radiofizika. [By] L.IA.Kantor i dr.  
Izd.2., dop. i ispr. Moskva, Svyaz'izdat, 1963. 672 p.  
(MIRA 16:8)

(Wire broadcasting) (Telecommunication)

ROZENBERG, Ya.G., inzh.

New cables for interdistrict communications and wire broadcasting networks. Vest. svyazi 21 no.3:10-11 Mr '61. (MIRA 14:6)

(Wire broadcasting) (Telephone lines)

ROZENBERG, YA. G.

Repair of radio receivers and apparatus at the radio broadcasting and receiving units on kolkhozes. Moskva, Gos. izd-vo lit-ry po voprosam svyazi i radio, 1952. 83 p. (53-36762).

TK6553.R7

KANTOR, L.Ya.; GUMEL'YA, A.N.; ROZENBERG, Ya.G.; AFANAS'YEV, A.P.;  
SAMORUKOV, D.A.; GUSEV, S.S.; DOGADIN, V.N.; RAMENSKIY, B.N.;  
PIONTKOVSKIY, B.A.; SVERDLOVA, I.S., red.; KARABILOVA, S.F.,  
tekhn. red.

[Electric communications and wire broadcasting] Elektriches-  
kaya svyaz' i radiofikatsiya. Moskva, Gos. izd-vo lit-ry  
po voprosam svyazi i radio, 1961. 607 p. (MIRA 14:5)  
(Telephone) (Wire broadcasting)

GUMEL'YA, A.N., inzh.; NALET'OV, A.A., inzh. Prinimali uchastiye: ROZENBERG, Ya.G.; SERGEYEV, M.F.; GUDKOV, P.P.; PETROVA, V.Ye., red.; KARABILOVA, S.F., tekhn.red.

[Regulations on the construction and repair of overhead communication lines and wire broadcasting networks] Pravila stroitel'stva i remonta vqzdushnykh liniy svyazi i radiotranslyatsionnykh setei. Moskva, Gos.izd-vo lit-ry po voprosam svyazi i radio. Pt.3.

[Construction and repair of overhead and underground lines and residential equipment for wire broadcasting and telephone networks] Stroitel'stvo i remont stoechnykh i podzemnykh liniy i oborudovanie domovoi raspredelitel'noi radiotranslyatsionnoi i telefonnoi vnutri-raionnoi setei. 1960. 198 p. (MIRA 13:9)

1. Russia (1923- U.S.S.R.) Ministerstvo svyazi.  
(Wire broadcasting) (Telephone)

ROZENBERG, Ya.G., inzh.; KLIMOV, V.P., inzh.

Results of the 1957-1958 contest for the best proposal for providing a radio system and district-wide telephone service. Vest. aviazi 18 no.12:33-35 D '58. (MIRA 11:12)  
(Telecommunication--Competitions)

SOV/111-58-2-19/27

AUTHORS: Rozenberg, Ya.G. and Klimov, V.P., Engineers

TITLE: A Universal Machine for Building and Repairing Underground and Open Air Wire Broadcast and Communication Lines (Universal'naya mashina dlya stroitel'stva i remonta podzemnykh i vozdukhnykh liniy radiofikatsii i VRS)

PERIODICAL: Vestnik svyazi, 1958, Nr 2, pp 24 - 25 (USSR)

ABSTRACT: The authors describe a universal machine which may be used for laying underground cables and building or repairing above ground communication lines. This self-propelled machine was designed by I.A. Kanivets and Ye.Ye. Makarov, both of Frunze. The 40 HP engine will move the vehicle, drive the earth auger and the crane for setting telephone poles, and the cutter for digging cable ditches. The machine has been tested with good results, but some of its parts must be improved. There are one diagram and one photo.

Card 1/1



AUTHORS: Rozenberg, Ya.G., Klimov, V.P., Engineers SOV/111-58-12-31/38

TITLE: Results of the 1957-1958 Competition for the Best Suggestions  
in the Field of Radio Relay and Intra-Rayon Communica-  
tions (Itogi konkursa 1957-1958 gg. na luchshiye predlozheniya  
v oblasti radiofikatsii i VRS)

PERIODICAL: Vestnik svyazi, 1958, Nr 12, pp 33-35 (USSR)

ABSTRACT: The article contains some of the more interesting suggestions  
made by Russian communication employees during 1957-1958:  
B.Ya. Gertsenshteyn, Leningrad, developed in cooperation with  
workers from NIITS a model of a transistorized condensing  
apparatus for subscriber telephone lines. N.N. Pavlov, Lenin-  
grad, suggested to use new tubes for the output stages of wire  
broadcast amplifier stations. There are many other communica-  
tion workers who also submitted valuable suggestions for im-  
proving technical equipment. They received various awards for  
their work. There are 3 diagrams and 1 table.

Card 1/1

SHTEYNHLEYGER, V.B.; AFANAS'YEV, O.A.; MISEZHNIKOV, G.S.; ROZENBERG, Ya.I.

Quantum paramagnetic traveling-wave amplifier of high  
efficiency. Prib. i tekhn. eksp. 9 no.5:136-138 S=O '64.  
(MIRA 17:12)

FAVH, Veniamin Moiseyevich; KHAMU, Yakov Izrailevich. Prinimani  
uchastiya: GEMIN, V.K.; YASHCHIN, E.O.; TALANOV, V.I.;  
ROZENBERG, Ye.L.; IVANUSHKO, N.D., red.

[Quantum radio physics] Kvantovaya radiofizika. Moskva,  
Sovetskoe radio, 1965. 607 p. (MIRA 18:3)

ROSENBERG, Y. M.

"On the Determination of the Elasticity Modulus with the Help of the Impressing Method," Zhur. Tekh. Fiz., 15, No. 3, 1945.

ROSENBERG, Y. V.

"The Application of the Raman-Scattering of Light to the Analysis of Motor Fuels," Iz. Ak. Nauk SSSR, Ser. Fiz., 4, No. 1, 1940. Mbr., Physics Inst. im. P.N. Lebedev, Dept. Physico-Math. Sci., Acad. Sci., -1948-.

ROZENBERG, YA.

USSR/Miscellaneous - Radio

Card 1/1

Author : Rozenberg, Ya.

Title : Technical Exploitation of collective farm radio-centers

Periodical : Radio, 3, 10 - 11, Mar, 1954

Abstract : General instructions are given for operating collective farm radio-centers.

Institution : .....

Submitted : .....

SMIRNOV, A.V., inzhener; ROZENBERG, Ya., inzhener

Protecting subscribers of wire rediffusion networks from atmospheric overvoltage. Vest. sviazi 15 no. 4:9-11 ap '55.

(MIRA 8:6)

(Radio--Interference)

ROZENBERG, YA.

USSR/Electronics - Cables

Dec 53

"Locating Faults in Underground Cables With Polyvinyl Chloride Coverings," M. Tseytlin, Ya. Rozenberg, M. Orlov

Radio, No 12, pp 28-31

Gives diagrams of circuits and procedure for locating faults in cables. Equipment consists of a portable 1000-kc oscillator, a radio relay center amplifier, portable af amplifier, metal probes, foot contact plates, and earphones.

276T34



TSEYTLIN, M.; ROZENBERG, Ya.; ORLOV, M.

Locating damage on underground cables with polyvinyl chloride covering. Radio no.12:28-31 D '53.

(MLRA 6:12)

(Electric cables)

ROZENBERG, Ya.

Technical operation of radio centers at collective farms. Radio  
no.3:10-11 Mr '54. (MLRA 7:3)  
(Radio)

ROZENBERG, Ya.G., inzh.; KLIMOV, V.P., inzh.

Universal machine for building and repairing subterranean and over-head radio lines and district-wide communication lines. Vest. sriazi  
18 no.2:24-25 F '58. (MIRA 1T:2)  
(Electric lines--Equipment and supplies)

ROSENBERG, YA. G.

USSR/ Electronics - Lightning arresters

Card 1/1 Pub. 133 - 5/19

Authors : Smirnov, A. Ya., and Rosenberg, Ya. G., Engineers

Title : Protecting subscribers of retransmitting radio stations from static overvoltages

Periodical : Vest. svyazi 4 (181), 9-11, Apr 1955

Abstract : Problems on the group protection of subscribers of retransmitting stations are considered. The problems deal with the static over-voltageing of receiving sets.

Institution : .....

Submitted : .....

MASHKOVSKIY, V.V.; ROZENBERG, Ya.G.; FAYERMAN, A.L.

Concerning the joint suspension of electric power distribution lines  
and wire broadcasting lines on the same poles. Prom.energ. 16  
no.11:50-51 N '61. (MIRA 14:10)

1. "Pervomayneft'" (for Mashkovskiy). 2. Ministerstvo svyazi  
SSSR (for Rozenberg). 3. Soyuzglavenergo (for Fayerman).  
(Electric lines---Overhead) (Radio lines)

ROZENBERG, Ya.I.; KASATKIN, V.G.

Transistorized device for measuring the level of liquid helium.  
Prib. i tekhn. eksp. 8 no.3:203 My-Je '63. (MIRA 16:9)  
(Liquid helium)

L 16075-65 EWT(d)/EWT(1)/EEC(b)-2/EWA(h) Ph-4/P1-4/P1-4/Pac-4/Peb SSD/ESD(t)/  
ESD(c)/ESD(gs)/SSD/BSA/AFWL/ASD(a)-5/AFEIR/AFTC(p)/RAEM(a) S/0120/64/000/005/0136/0138  
ACCESSION NR: AP4047476

AUTHOR: Shteynshleyger, V. B.; Afanas'yev, O. A.; Mizezhnikov, G. S.; Rozenberg,  
Ya. I.

TITLE: Traveling-wave paramagnetic amplifier with increased efficiency B

SOURCE: Pribery\* i tekhnika eksperimenta, no. 5, 1964, 136-138

TOPIC TAGS: maser, paramagnetic amplifier, traveling wave paramagnetic amplifier,  
laser

ABSTRACT: This maser was described in part in a previous article by two of the authors. The present article gives the following characteristics of the amplifier:  
1) it operates at a temperature of 4.2K, i.e., without the pumping-out of helium;  
2) the delay system, which is 115 mm in length, is located in a metallic cryostat placed between the poles of the permanent magnet. Magnetization windings placed on the poles are used for accurate setting of the magnetic field intensity. Signal and pumping cryostat output waveguides are fixed on the cover of the cryostat. It was found that the highest coefficient of inversion is obtained when transition 1-4 is used for pumping. At 22 Mc the resultant paramagnetic amplification was 28 db. Noise temperature calculated on the basis of measurement data was 15K. A des-

Card 1/2

L 16075-65

ACCESSION NR: AP4047476

cription is also given of the ferrite isolator used in the system to eliminate regenerative effects. The isolator was made of polycrystalline nickel-zinc ferrite-chromite whose saturated magnetic field at 4.2K was 4200 oe. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 27Jun63

ENCL: 00

SUB CODE: EC

NO REF SOV: 004

OTHER: 002

Card 2/2



ROZENBERG, Ye.I., inzh.

Mobile electrical measuring laboratory for city electrical systems.  
Nov. tekhn. zhil.-kom. khoz.: Elek. i tepl. gor. no.5:18-21 '64.  
(MIRA 18:2)

1. Upravleniye kommunal'noy energetiki Ministerstva kommunal'nogo  
khozyaystva RSFSR.

24,7900 (1055, 1144, 1147)  
15 2666

30085  
S/046/61/025/011/031/031  
B117/B102

AUTHORS: Mizezhnikov, G. S., Rozenberg, Ya. I., and  
Shteynshleyger, V. B.

TITLE: Measurement of ferromagnetic resonance parameters in  
polycrystalline ferrites at liquid-helium temperatures

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya,  
v. 25, no. 11, 1961, 1430-1432

TEXT: Measurement results of ferromagnetic resonance parameters in  
polycrystalline ferrites with high saturation magnetization at 4-2°K are  
given. The width  $\Delta H$  of the band and the size of the external resonance  
field  $H_{res}$  were measured. The saturation magnetization  $M_0$  was determined  
from the  $H_{res}$  values obtained by using the equation of C. Kittel

(Ref. 2; see below). The block diagram of the device used for measuring  
the parameters is shown. The measurements were conducted at a wavelength  
of 3.2 cm in a cylindrical cavity (diameter 22 mm) with  $H_{111}$ -type  
oscillations. Several types of ferrites were investigated: Mg-Mn.

Card 1/2

Measurement of ferromagnetic ...

30085  
S/048/61/025/011/031/031  
B117/B102

ferrite П-28 (P-28) Ni-Zn ferrites M-55 (M-55), and M-258 (M-258)  
(Ref. 3: Fabrikov V. A., Gushchina Z. M., Kudryavtsev V. D., present  
periodical, no. 11, 1961, 1429). Best results were obtained with M-258  
(66.38% by weight of Fe, 8.11% of ZnO, 9.93% of NiO, 7.63% of MnCO<sub>3</sub>,  
1.34% of MgO, 6.61% of CuO). M-55 rendered less favorable results. It  
was not possible to carry out quantitative measurements for P-28 since  
the line of ferromagnetic resonance was too much blurred, and resonance  
was insufficient. For M-258 samples in the form of a sphere of 0.5 mm  
diameter and a disk of 0.16 mm thickness and 1.7 mm diameter, the  
following values were ascertained: at 293°K:  $H_{\text{sphere}} = 3015 \text{ oe}$ ,  
 $H_{\text{disk}} = 1720 \text{ oe}$ ,  $\Delta H = 120 \text{ oe}$ ,  $H_a = 315 \text{ oe}$ ,  $M_0 = 380 \text{ gauss}$ ; at 4.2°K:  
 $H_{\text{sphere}} = 2270 \text{ oe}$ ,  $H_{\text{disk}} = 850 \text{ oe}$ ,  $\Delta H = 600 \text{ oe}$ ,  $H_a = 1060 \text{ oe}$ ,  
 $M_0 = 420 \text{ gauss}$ . Hence, it was found that the band of ferromagnetic  
resonance of the polycrystalline ferrites investigated was broadened  
strongly at helium temperature. The minimum width of the band (800 oe)  
was observed in the specially produced Ni-Zn ferrite of the type M-258.  
The authors thank V. A. Fabrikov and A. G. Gurevich for a discussion of  
results. There are 1 figure, 1 table, and 3 references: 2 Soviet and  
Card 2/12

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ACC NR: AP7000334

(A)

SOURCE CODE: UR/0413/66/000/022/0085/0085

INVENTOR: Kosach, A. V.; Derkanosov, Yu. A.; Iyevin'sh, Ya. K.; Rozenberg, Ya. Ya.

ORG: none

TITLE: Remote-control cable linkage of the hydraulic distributor of a tractor-mounted loader. Class 35, No. 188639

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 22, 1966, 85

TOPIC TAGS: tractor, agricultural machinery, tractor mounted implement, *REMOTE CONTROL SYSTEM*

ABSTRACT: An Author's Certificate has been issued for a remote-control cable linkage for the hydraulic distributor of a tractor-mounted loader having a hinged arm atop a king post. The distributor levers are rigidly fixed to the ends of the cables, which pass around the blocks located on the distributor support and through lead-ins having adjustable tension screws. The cables leading to the control pedestal are sheathed in flexible sleeves fastened to the rotary disks of the control-pedestal levers. This design improves the control maneuverability of the loader on various cab-type tractors. Orig. art. has: 2 figures.

SUB CODE: 13/ SUBM DATE: 24Jul63/

Card 1/1

UDC: 621.869.447-82-519

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